

## Freeform Search

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<b>Database:</b>	US Pre-Grant Publication Full-Text Database US Patents Full-Text Database US OCR Full-Text Database EPO Abstracts Database JPO Abstracts Database Derwent World Patents Index IBM Technical Disclosure Bulletins
<b>Term:</b>	<input type="text" value="L11 and api"/>
<b>Display:</b>	<input type="text" value="100"/> Documents in <u>Display Format:</u> <input type="button" value="Format"/> Starting with Number <input type="text" value="1"/>
<b>Generate:</b>	<input type="radio"/> Hit List <input checked="" type="radio"/> Hit Count <input type="radio"/> Side by Side <input type="radio"/> Image
<input type="button" value="Search"/> <input type="button" value="Clear"/> <input type="button" value="Interrupt"/>	

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### Search History

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**DATE:** Wednesday, August 10, 2005 [Printable Copy](#) [Create Case](#)

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
<u>side by side</u>			result set
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=OR</i>			
<u>L12</u>	L11 and api	9	<u>L12</u>
<u>L11</u>	L10 and (driver near software)	10	<u>L11</u>
<u>L10</u>	(federated near bean)	23	<u>L10</u>
<u>L9</u>	L7 and (federated near bean)	1	<u>L9</u>
<i>DB=USPT; PLUR=YES; OP=OR</i>			
<u>L8</u>	L7 and (federated near bean)	1	<u>L8</u>
<u>L7</u>	driver near software	4661	<u>L7</u>
<u>L6</u>	L5 and api	1	<u>L6</u>
<u>L5</u>	L4 and software	3	<u>L5</u>
<u>L4</u>	management near facade	3	<u>L4</u>
<u>L3</u>	L2 and table	1	<u>L3</u>
<u>L2</u>	(6014557).pn.	1	<u>L2</u>
<u>L1</u>	(6501950).pn.	1	<u>L1</u>

END OF SEARCH HISTORY

## Refine Search

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### Search Results -

Term	Documents
709/230	1627
709/230S	0
(12 AND (709/230.CCLS.)).PGPB,USPT,USOC,EPAB,JPAB,DWPI.	1
(L12 AND (709/230.CCLS.)).PGPB,USPT,USOC,EPAB,JPAB,DWPI.	1

**Database:**  US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
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 IBM Technical Disclosure Bulletins

**Search:**

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### Search History

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**DATE:** Wednesday, August 10, 2005 [Printable Copy](#) [Create Case](#)

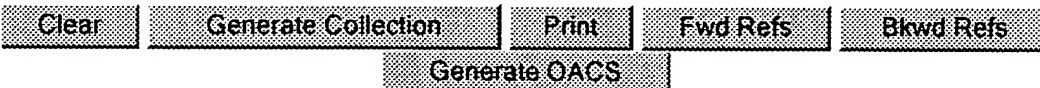
<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side			result set
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=OR</i>			
<u>L18</u>	112 and (709/230.ccls.)	1	<u>L18</u>
<u>L17</u>	112 and (719/316.ccls.)	1	<u>L17</u>
<u>L16</u>	112 and (719/330.ccls.)	1	<u>L16</u>
<u>L15</u>	112 and (719/330ccls.)	0	<u>L15</u>
<u>L14</u>	112 and (719/328.ccls.)	2	<u>L14</u>
<u>L13</u>	112 and (719/321.ccls.)	2	<u>L13</u>
<u>L12</u>	L11 and api	9	<u>L12</u>
<u>L11</u>	L10 and (driver near software)	10	<u>L11</u>
<u>L10</u>	(federated near bean)	23	<u>L10</u>

L9 L7 and (federated near bean) 1 L9  
*DB=USPT; PLUR=YES; OP=OR*

<u>L8</u>	L7 and (federated near bean)	1	<u>L8</u>
<u>L7</u>	driver near software	4661	<u>L7</u>
<u>L6</u>	L5 and api	1	<u>L6</u>
<u>L5</u>	L4 and software	3	<u>L5</u>
<u>L4</u>	management near facade	3	<u>L4</u>
<u>L3</u>	L2 and table	1	<u>L3</u>
<u>L2</u>	(6014557).pn.	1	<u>L2</u>
<u>L1</u>	(6501950).pn.	1	<u>L1</u>

END OF SEARCH HISTORY

## Hit List



Search Results - Record(s) 1 through 9 of 9 returned.

1. Document ID: US 20030217195 A1

Using default format because multiple data bases are involved.

L12: Entry 1 of 9

File: PGPB

Nov 20, 2003

PGPUB-DOCUMENT-NUMBER: 20030217195

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030217195 A1

TITLE: Method and apparatus for managing host-based data services using CIM providers

PUBLICATION-DATE: November 20, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mandal, Chhandomay	Nashua	NH	US	
DaCosta, Jillian I.	Nashua	NH	US	
Cao, Lanshan	Andover	MA	US	
Pokigo, Roberta A.	Billerica	MA	US	

US-CL-CURRENT: 719/330; 709/223, 719/321



2. Document ID: US 20030204557 A1

L12: Entry 2 of 9

File: PGPB

Oct 30, 2003

PGPUB-DOCUMENT-NUMBER: 20030204557

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030204557 A1

TITLE: Method and apparatus for managing remote data replication using CIM providers in a distributed computer system

PUBLICATION-DATE: October 30, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mandal, Chhandomay	Nashua	NH	US	
DaCosta, Jillian I.	Nashua	NH	US	

Cao, Lanshan	Andover	MA	US
Pokigo, Roberta A.	Billerica	MA	US

US-CL-CURRENT: 709/202; 707/204[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn D](#)

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**3. Document ID: US 20030172088 A1**

L12: Entry 3 of 9

File: PGPB

Sep 11, 2003

PGPUB-DOCUMENT-NUMBER: 20030172088

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030172088 A1

TITLE: Method and apparatus for managing a data imaging system using CIM providers in a distributed computer system

PUBLICATION-DATE: September 11, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mandal, Chhandomay	Nashua	NH	US	
DaCosta, Jillian I.	Nashua	NH	US	
Cao, Lanshan	Andover	MA	US	
France, Jonathan C.	Somerville	MA	US	
Du, Yuantai	Nashua	NH	US	
Pokigo, Roberta A.	Billerica	MA	US	

US-CL-CURRENT: 707/200[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn D](#)

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**4. Document ID: US 20030088713 A1**

L12: Entry 4 of 9

File: PGPB

May 8, 2003

PGPUB-DOCUMENT-NUMBER: 20030088713

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030088713 A1

TITLE: Method and apparatus for managing data caching in a distributed computer system

PUBLICATION-DATE: May 8, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mandal, Chhandomay	Nashua	NH	US	
Musante, Mark J.	Westford	MA	US	

Wagener, Peter J.	Somerville	MA	US
DaCosta, Jillian I.	Nashua	NH	US
Pokigo, Roberta A.	Billerica	MA	US
Goosey, Melora L.	Andover	MA	US

US-CL-CURRENT: 719/328

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KINIC](#) | [Drawn D](#)

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5. Document ID: US 20030084198 A1

L12: Entry 5 of 9

File: PGPB

May 1, 2003

PGPUB-DOCUMENT-NUMBER: 20030084198

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030084198 A1

TITLE: Method and apparatus for managing data services in a distributed computer system

PUBLICATION-DATE: May 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mandal, Chhandomay	Nashua	NH	US	
Musante, Mark J.	Westford	MA	US	
Wagener, Peter J.	Somerville	MA	US	
Pokigo, Roberta A.	Billerica	MA	US	
Goosey, Melora L.	Andover	MA	US	

US-CL-CURRENT: 719/316

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KINIC](#) | [Drawn D](#)

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6. Document ID: US 20030061399 A1

L12: Entry 6 of 9

File: PGPB

Mar 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030061399

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030061399 A1

TITLE: Method and apparatus for managing data volumes in a distributed computer system

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Wagener, Peter J.	Somerville	MA	US	

Musante, Mark J.	Westford	MA	US
Mandal, Chhandomay	Nashua	NH	US
Goosey, Melora L.	Andover	MA	US
Pokigo, Roberta A.	Billerica	MA	US
Quill, George J.	Clinton	MA	US
Gratzer, Peter L.	Broomfield	CO	US
DaCosta, Jillian I.	Nashua	NH	US
France, Jonathan C.	Somerville	MA	US

US-CL-CURRENT: 719/321; 719/328

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWC](#) | [Drawn D](#)

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7. Document ID: US 20030061366 A1

L12: Entry 7 of 9

File: PGPB

Mar 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030061366

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030061366 A1

TITLE: Method and apparatus for managing data imaging in a distributed computer system

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Musante, Mark J.	Westford	MA	US	
Mandal, Chhandomay	Nashua	NH	US	
Wagener, Peter J.	Somerville	MA	US	
Zhang, Lanshan	Andover	MA	US	
Goosey, Melora L.	Andover	MA	US	
Pokigo, Roberta A.	Billerica	MA	US	

US-CL-CURRENT: 709/230; 709/237

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWC](#) | [Drawn D](#)

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8. Document ID: US 20030033327 A1

L12: Entry 8 of 9

File: PGPB

Feb 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030033327

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030033327 A1

TITLE: Method and apparatus for managing remote data replication in a distributed computer system

PUBLICATION-DATE: February 13, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mandal, Chhandomay	Nashua	NH	US	
Wagener, Peter J.	Somerville	MA	US	
Musante, Mark J.	Westford	MA	US	
DaCosta, Jillian I.	Nashua	NH	US	
Zhang, Lanshan	Andover	MA	US	
Pokigo, Roberta A.	Billerica	MA	US	

US-CL-CURRENT: 707/204

<a href="#">Full</a>	<a href="#">Title</a>	<a href="#">Citation</a>	<a href="#">Front</a>	<a href="#">Review</a>	<a href="#">Classification</a>	<a href="#">Date</a>	<a href="#">Reference</a>	<a href="#">Sequences</a>	<a href="#">Attachments</a>	<a href="#">Claims</a>	<a href="#">RQNC</a>	<a href="#">Drawings</a>
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9. Document ID: US 6772178 B2

L12: Entry 9 of 9

File: USPT

Aug 3, 2004

US-PAT-NO: 6772178

DOCUMENT-IDENTIFIER: US 6772178 B2

TITLE: Method and apparatus for managing remote data replication in a distributed computer system

DATE-ISSUED: August 3, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mandal; Chhandomay	Nashua	NH		
Wagener; Peter J.	Somerville	MA		
Musante; Mark J.	Westford	MA		
DaCosta; Jillian I.	Nashua	NH		
Zhang; Lanshan	Andover	MA		
Pokigo; Roberta A.	Billerica	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Sun Microsystems, Inc.	Santa Clara	CA			02

APPL-NO: 09/ 917145 [PALM]

DATE FILED: July 27, 2001

INT-CL: [07] G06 F 17/00

US-CL-ISSUED: 707/204; 707/10, 707/200, 709/217, 709/220, 709/223

US-CL-CURRENT: 707/204; 707/10, 707/200, 709/217, 709/220, 709/223

FIELD-OF-SEARCH: 707/10, 707/200, 707/204, 709/226, 709/201, 709/203, 709/217, 709/220, 709/223, 709/316, 711/162, 711/203, 714/5

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>6002085</u>	December 1999	Utsumi et al.	174/28
<u>6058401</u>	May 2000	Stamos et al.	707/201
<u>6453326</u>	September 2002	Parham et al.	707/204
<u>6571232</u>	May 2003	Goldberg et al.	707/2
<u>6625613</u>	September 2003	Thompson	707/102
<u>2003/0014432</u>	January 2003	Teloh et al.	707/204
<u>2003/0014433</u>	January 2003	Teloh et al.	707/204
<u>2003/0014523</u>	January 2003	Teloh et al.	709/226
<u>2003/0033327</u>	February 2003	Mandal et al.	707/204
<u>2003/0061399</u>	March 2003	Wagener et al.	709/321
<u>2003/0074446</u>	April 2003	Musante et al.	709/224
<u>2003/0084116</u>	May 2003	Musante et al.	709/217
<u>2003/0084198</u>	May 2003	Mandal et al.	709/316
<u>2003/0088713</u>	May 2003	Mandal et al.	709/328
<u>2003/0105840</u>	June 2003	Mandal et al.	709/220

## OTHER PUBLICATIONS

- Kyeongho et al., "Scheduling of storage and cache servers for replicated multimedia data", IEEE, pp. 484-487, 1997.\*
- Bhide et al., "Implicit replication in a network file server", IEEE, pp. 85-90.\*
- Cai et al., A new medium access control for multi-channel Ad Hoc networks; IEEE, pp. 966-971.\*
- Makpangou et al., "Replicated directory service for weakly consistent distributed caches", ACN, pp1-9.\*
- Vason P. Srinivas, "An architecture for extended abstract data flow", IEEE, pp. 303-325, 1981.
- Madan et al., "A distributed real time database for heterogeneous computer control systems", IEEE, pp. 435-440, 1995.
- Pu et al., "Replica control in distributed systems", ACM, pp. 377-386, 1991.

ART-UNIT: 2171

PRIMARY-EXAMINER: Corrielus; Jean M.

ATTY-AGENT-FIRM: Kudirka &amp; Jobse, LLP

## ABSTRACT:

A three-tiered data replication management system is used on a distributed computer system connected by a network. The lowest tier comprises management facade software running on each machine that converts a platform-dependent interface written in low-level kernel routines that actually perform the data replication to platform-independent method calls. The middle tier is a set of federated Java beans, which communicate with each other, with the management facades, and with the upper tier of the system. The upper tier of the inventive system comprises presentation programs that can be directly manipulated by management personnel to view and control the system. The federated Java beans can run on any machine in the system.

and communicate via the network. A data replication bean runs on each host and at least one such bean communicates directly with a management interface that is controlled by a user.

22 Claims, 18 Drawing figures

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Term	Documents
API	87306
APIS	9617
(11 AND API).PGPB,USPT,USOC,EPAB,JPAB,DWPI.	9
(L11 AND API ).PGPB,USPT,USOC,EPAB,JPAB,DWPI.	9

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